

Medical Education at ICBAS-UP

Masters' Dissertation

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To the Office of Medical Education at ICBAS-UP

*“We make a living by what we get,
we make a life by what we give”*

Winston Churchill

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Abstract

With this thesis, the author intends to make an in-depth analysis to the overall quality of medical education at ICBAS-UP. The school is currently going through an exciting period of transformation, with the implementation of a new academic curriculum and the creation of a medical education office. However, the best and most recent data available were from a self-evaluation made in 2015. The results of this were the starting point to the elaboration of this work. In order to do a complete and in-depth study of the reality of ICBAS, the author presents the World Federation for Medical Education (WFME) Global Standards in Medical Education. This document encompasses nearly 200 criteria, distributed through 9 areas, and divided into basic and quality standards. All these were categorised as accomplished, considered, or not considered yet. A statistical study was then made, as to make exact conclusions. From these, the author makes specific and unambiguous recommendations. The ultimate goal of this thesis is to be a working tool for the Medical Education Office, to whom the author consigns his work

Key words: Medical education, Quality Standards, Compliance, Evaluation

Contents

Medical Education at ICBAS-UP	1
Masters' Dissertation	1
Pedro Correia de Miranda	1
May 2017	1
Acknowledgements	4
Abstract	6
Contents	8
Background	10
Understanding ICBAS-UP and the WFME	10
ICBAS-UP	10
SWOT Analyses	13
Strengths7:	13
Weaknesses8:	14
Opportunities9:	14
Threats10:	15
Action Points11:	15
The World Federation for Medical Education	17
Discussion	20
ICBAS and the global standards in medical education	20
Conclusion	36
ICBAS and the global standards in medical education	36
References	44

Background

Understanding ICBAS-UP and the WFME

ICBAS-UP

The Instituto de Ciências Biomédicas Abel Salazar - ICBAS is a university school with the mission of “creating, transmitting and sharing knowledge on the area of sciences of health and life”. It ensures pedagogic, scientific and cultural freedom, and promotes a broad participation in academic life. In striving for its mission, ICBAS collaborates with the other entities of the University of Porto. ICBAS develops a continuous self evaluation culture, in obedience to legal norms and in articulation with the procedures of the University, seeking to continuously promote the highest quality standards.¹

The degree of Master in Medicine seeks to give students the following skills:

- A) Competencies of medicine, in knowledge, procedures and attitudes, compatible with the autonomous exercise of the profession
- B) Capacity to solve problems in a multidisciplinary context, in the practice under both clinical and investigational settings
- C) Integrate knowledge, develop solutions, and participate in situations that allow a self-oriented and autonomous continuous professional development
- D) Integrate knowledge, deal with complex questions, develop solutions, including reflections on the implications of ethical and social responsibilities that come with these solutions; and be able clearly communicate conclusions, knowledge and the reasoning upon which they are based.²

This thesis seeks to evaluate the quality of the medical education at ICBAS. However, ICBAS itself has its own ways of evaluating the work it develops. University of Porto has set quality assurance mechanisms, through the Continuous Improvement Office, that should make available online all the necessary indicators for evaluation, through the document “Quality management system manual” of the University, that outlines the available mechanisms for this purpose (eg. annual report of the Executive Commission, pedagogical inquiries). The bodies of the Executive Commission regularly meet to diagnose and correct problems found, both through regular procedures, and through direct information from teachers, students, and technicians. The Pedagogical Forums are also an important mechanism, as they promote a culture of sharing experiences, important for the quality improvement of medical education. At the hospital, inquiries are made to students, to promote the analysis of the quality of the teaching of the clinical components of the Masters in Medicine. **3**

ICBAS has 1085 students registered to the Masters in Medicine, 34.3% of which are male, and 65.7% are female; 21% being younger than 20 years old, 57% being between 20 and 23, 11.9% being between 24 and 27, and the remaining 10.1% being 28 or more years old. The first two years are the ones with less registered students (139 each), against a maximum of 227 registered to the 4th year of studies.**4**

Satisfaction inquiries are sent to students every semester, and the great effort made to increase the amount of students answering the “Pedagogical Inquiries” has lead to response rate above 50% in some subjects. The results of these inquiries are sent by the Rector’s office directly to the Pedagogical Council and Management Body of the Masters in Medicine, that then share them with the teachers. The average score of any given subject is 5 points, on a scale of 1 to 7, indicating that students are generally happy with the quality of the training provided by ICBAS.**5**

The learning goals of the Masters should emphasise the central aspects of the training of a physician capable of dealing with the current demands of his/her job. Behavioural and social sciences, health promotion, and disease prevention are central elements. The development of the required capacities and atti-

tudes to have an adequate physician-patient relationship, the adoption of a professional behaviour and a continuous need of learning should not be left to a second plan as a consequence of learning factual knowledge. **6**

A core curriculum concept was developed, composed of central contents, compulsory to all students, and optional blocks that students register according to personal interests, as an attempt to correct the excess of information delivered through traditional curricula. Students should have the key-role in identifying their own learning needs, and in the planning and driving of their own learning process. **6**

As for the context and atmosphere of teaching-learning processes, ICBAS' model has two main pillars: one is the importance of using multiple learning atmospheres, combining the university hospital with other entities and community spaces such as primary healthcare facilities; the second is the recognition of the importance of a multidisciplinary work in treating health problems. **6**

SWOT Analyses

ICBAS undertook, during 2015, a self-evaluation process where a SWOT analysis was done. The main conclusions are outlined below, as input to the discussion of this thesis. These are a direct transcript from the original document, summarised to ease the readers task in studying them.

Strengths:

- ICBAS is a University School that offers courses, at different levels, in the Life Sciences, in a multidisciplinary approach with strong tradition and training in the basic sciences. The sharing of its infrastructure with the Pharmacy School facilitates the integration of knowledge from areas of science that are different but complementary to each other;
- The legal assertion and cooperation with the nearby university hospital of ICBAS (CHP), and with other health facilities within the Northern region, promotes a comprehensive and committed training of ICBAS medical students;
- The high scientific production by ICBAS professors, which is reflected in the quality of there teaching and on the continuous updating of medical and basic knowledge;
- The support that ICBAS offers to professors (and to a more limited extent to students) to publish original studies;
- The recently set-up Medical Simulation Centre, which allows improvement in practical training in medicine;
- The commitment of the Student Support Office and AEICBAS (Student's Union) in aiding students;
- The students participation in the school's governing bodies, and their representation in organs of the different study cycles of ICBAS.

Weaknesses⁸:

- The Curriculum:
 - The 3rd year of the current curriculum encompasses too many subjects with a density that makes this year particularly difficult
 - Contact with patients starts too late
 - Lack of (early) training in Basic Life Support
 - Low curricular weight of the Masters' Dissertation
 - The number of weekly hours of contact is considered to be excessive, taking into account the need for students to have reasonable periods of time for their self-study
- The number of students per clinical lecturer in a class is too high
- Information provided by non-teaching staff is inadequate and/or out-dated
- The management of quality of education in the medical house lacks a structure capable of monitoring teaching methods and evaluation methods used by the professors to grade students: there is no Medical Education Office in ICBAS (please note such an office has been established on the meantime)
- Teachers' participation in actions to improve their pedagogic abilities is still below the desired and medical duties of many aggravate their availability to students

Opportunities⁹:

- It is necessary to promote early integration of students in medical research activities and in accompanying clinical trials;
- Several areas of Life Sciences in ICBAS offer opportunities for the creation of multidisciplinary scientific projects;
- It is necessary to better explore the Simulation Centre;
- There is under-usage of some available resources

- The new revised curriculum is an opportunity to improve working methods and promote a more integrated education, with a vertical and horizontal articulation of scientific contents.

Threats¹⁰:

- The legal impossibility of reducing the number of medical students that are enrolled in ICBAS when compared with the teaching capacity of ICBAS and CHP;
- The law of budgetary balance and the current financial constraints that prevent hiring of more staff;
- The increase in student/faculty ratio is close to be beyond the limits that assure that education of medical students follows the international standards of quality;
- Recent changes in medical internship legislation may jeopardise the structure of the curriculum, even in its newly proposed version;
- There are difficulties in persuading professors to change teaching methods, particularly in cases where education goals are not taken in consideration.

Action Points¹¹:

1. A revised curriculum which essentially consists in integrating the following objectives:
 - 1.1. Existence of optional subjects in increased numbers and spread out over different semesters to allow a personalisation of the academic formation by each student;
 - 1.2. Reorganisation of the subjects of the basic cycle of the medical course, by compression, association or merge of current disciplines, with reduction of contact hours;

- 1.3. Decrease in subjects of the 3rd year by redistribution to other years, keeping the adequacy of contents and the progression of learning;
- 1.4. Clinical teaching since the 1st year, through the creation of a discipline that will unite the educational foundations of clinical management of the patient, and also include eminently practical teaching materials related to health;
- 1.5. Promoting the multidisciplinary nature of learning at ICBAS, and opening the chance for students to attend optional disciplines in other study cycles of the University of Porto;
- 1.6. Enhancing the academic value of the Thesis as part of the new curriculum through a reorganisation of the vocational year (6th year) that allows time for the preparation of the thesis, with increased ECTS;
- 1.7. Defining ECTS in multiples of 3, according to the recommendations of the Coordinating Council on the Education Model of the University of Porto, envisioning the promotion of mobility within the University of Porto;
2. Increase the number of classrooms (which has already started to happen in the school year 2015/16)
3. Establish collaborative agreements with additional health institutions, enabling a better distribution of students during clinical learning and training.
4. University of Porto training of human resources can be better used to the benefit of the continuous improvement of the services.
5. ICBAS's management bodies monitor more closely the training needs and encourage the attendance of training by the administrative staff, not only the training offered by the University itself, but also training offered by other institutions.
6. Implementing a Medical Education Office would be a key tool for improving quality management of the medical course, in that it would ensure the monitoring of teaching methods and evaluation of students, the orientation of professors in their teaching, and the use of new pedagogical tools, etc. (Please note such office as recently been established).
7. Raising awareness amongst professors of the importance of their participation in actions that optimise their teaching skills. In the case of professors who accumulate medical functions, ICBAS seeks to promote, in collaboration with the CHP, regular actions with timings that are adequate to be attended by the professors.

The World Federation for Medical Education

The World Federation for Medical Education (WFME) has the mission of enhancing the quality of medical education worldwide, and promote the highest standards in medical education. This mission is met through the development of standards in medical education, by the promotion of accreditation of medical schools, with the development of databases on medical education, through projects on the future of medicine and medical education, and through other publications and partnerships.

In the fulfilment of this task, the Federation works in¹²:

- A. promoting the full and frequent exchange of information relevant to the advancement of medical education;
- B. promoting the advancement of medical education, education in medical research and research relating to medical education;
- C. promoting the sound, scientific, ethical and socially responsive management of medical education and medical schools;
- D. promoting programmes designed to strengthen medical education and encourage the mutual support of programmes in medical education and education in the related disciplines;
- E. promoting the joint planning of programmes pertaining to the relation between education in medicine and systems of delivery of health care;
- F. facilitating the liaison between the Federation and relevant professional associations throughout the world and to facilitate the liaison of such bodies with international organisations (in particular with the World Health Organisation, the United Nations Children's Fund, the United Nations Development Programme, the United Nations Educational, Scientific and Cultural Organisation, World Bank, and global organisations representing other health-care professions).

The **WFME programme on global standards in medical education**, approved by the World Health Organisation (WHO) and the World Medical Association (WMA), had from the very outset three main intentions:

- to stimulate authorities, organisations and institutions having responsibility for medical education to formulate their own plans for change and for quality improvement in accordance with international recommendations;
- to establish a system of national and/or international evaluation, accreditation and recognition of medical educational institutions and programmes to assure minimum quality standards for the programmes; and
- to safeguard practice in medicine and medical manpower utilisation, in the context of increasing internationalisation, by well-defined international standards in medical education.

Several reports have described the necessity for radical changes and innovations in the structure and process of medical education at all levels. Such reconstruction is essential to:

- prepare doctors for the needs and expectations of society;
- cope with the explosion in medical scientific knowledge and technology;
- inculcate ability for life-long learning;
- ensure training in the new information technologies;
- adjust medical education to changing conditions in the health care delivery system. ¹³

The WFME recommends the following set of global standards in basic medical education. The set of standards are structured according to 9 areas with a total of 35 sub-areas, being aware of the complex interaction and links between them.

“**Areas**” are defined as broad components in the process, structure, content, outcomes/competencies, assessment and learning environment of basic medical education and cover:

- 7.1.Mission and outcomes
- 7.2.Educational programme
- 7.3.Assessment of students
- 7.4.Students
- 7.5.Academic staff/faculty
- 7.6.Educational resources
- 7.7.Programme evaluation
- 7.8.Governance and administration
- 7.9.Continuous renewal

“**Sub-areas**” are defined as specific aspects of an area, corresponding to performance indicators.

“**Standards**” are specified for each sub-area using two levels of attainment:

- Basic standard: This means that the standard in principle must be met by every medical school and fulfilment demonstrated during evaluation of the school. Basic standards are expressed by a “must”.

- Standard for quality development: This means that the standard is in accordance with international consensus about best practice for medical schools and basic medical education. Fulfilment of — or initiatives to fulfil — some or all of such standards should be documented by medical schools. Fulfilment of these standards will vary with the stage of development of the medical schools, available resources and educational policy and other local conditions influencing relevance, priorities and possibilities. Even the most advanced schools might not comply with all standards. Standards for quality development are expressed by a “should”. ¹⁴

Discussion

ICBAS and the global standards in medical education

In this section, the WFME programme on global standards in medical education shall be analysed, from the perspective of its implementation on the medical degree at ICBAS. A comment is made for each subarea, seeking to define its standards as accomplished, considered, or not considered yet. Recommendations are made each time considered relevant.

Please note that, as per imposition of the president of the judge, the standards themselves are not published on this version. This is against the will of the author. The standards can be found here:

<http://wfme.org/standards/bme/78-new-version-2012-quality-improvement-in-basic-medical-education-english/file>

1. Mission and Outcomes

1. Mission

Comment:

ICBAS has a published mission that encompasses the basic standards (B 1.1.1 to B 1.1.8 are accomplished). Medical research is a notorious part of ICBAS' mission as is global health (Q 1.1.1 and Q 1.1.2 are accomplished). The multidisciplinary approach to live sciences is part of ICBAS's core. It started with this goal, and still grows like that currently. It is believed that this approach is a milestone to transmit the importance of a global health perspective to its students.

1.2 Institutional autonomy and academic freedom

Comment:

Though it is considered that institutional autonomy and academic freedom do exist, as shown by a new proposed curriculum that is based on new research,

amongst others, (B 1.2.1, Q 1.2.1 and Q 1.2.2 are accomplished), the current financial constraints dictated by central governmental policies, and university guidelines, do not allow an autonomous allocation of resources (B 1.2.2 is not considered yet).

1.3 Educational Outcomes

Comment:

Intended educational outcomes are published on the university's website (B 1.3.1 to B 1.3.6 and B 1.3.8 are accomplished) but no school's code of conduct exists, other than specific ones written by teachers and regarding their course specifically (B 1.3.7 is not considered yet). No follow-up with students is done, as to link them with postgraduate training, and despite the importance given to research, the school does not specify its intended outcomes. Global health itself is a gap on the school's curriculum (Q 1.3.1 to Q 1.3.3 are not considered yet), despite a multidisciplinary approach to health sciences. It is recommended that the school creates a code of conduct, that the principle should share with the freshmen during the welcoming week. This would serve as a guide to the expected attitudes of students. Moreover, the recently created Medical Education Office should provide a more specific and complete aid to students that are graduating, helping them through the process of applying to residency and post-graduate training.

1.4 Participation in formulation of mission and outcomes

Comment:

There is no obvious evidence that the school engaged with other stakeholders in the formulation, or update, of its mission (B 1.4.1 and Q 1.4.1 are not considered yet). It is recommended that, next time ICBAS updates its mission, social media and other online communication means are used, as to gather as much input to this process as possible.

2. Education Programme

2.1 Framework of the programme

Comment:

It is considered that the medical curriculum fulfils these goals, and the newly revised curriculum gives a special focus to the importance of students taking responsibility for their learning processes (B 2.1.1 to B 2.1.3 and Q 2.1.1 are accomplished).

2.2 Scientific method

Comment:

It is believed that medical research is one of the biggest qualities of the school, with its principals being taught throughout the whole curricula (B 2.2.1 to B 2.2.3 are accomplished). However, despite the promotion of research at ICBAS, research is not itself part of the curriculum (Q 2.2.1 is not yet considered). There is a lot of investigation at ICBAS, but it is done mostly by staff and investigators, and not by students themselves. Students should be encouraged to actively engage with research. A successful example of where this actually happens is the fourth year course on general therapeutics, where all students actively work on research and investigation, and present their results at the end of the academic year.

2.3 Basic biomedical sciences

Comment:

It is considered that, through specific courses, the curriculum allows a student to create full understanding of clinical sciences, including the needs of the society and the health care system (B 2.3.1, B 2.3.2, Q 2.3.1 and Q 2.3.2 are accomplished)

2.4 Behavioural and social sciences, medical ethics and jurisprudence

Comment:

The pre-clinical cycle of the curriculum encompasses all the basic standards, and most of the quality standards, though more importance should be given to the needs of society and the health care system. (B 2.4.1 to B 2.4.4, and Q 2.4.1 to Q 2.4.3 are accomplished).

2.5 Clinical sciences and skills

Comment:

Though standards B 2.5.1 and B 2.5.3 are accomplished, it is a general agreement that actual contact with patients starts too late (only as off the 3rd year) and that there is no specific information about the timing of any type of training (B 2.5.2 and B. 2.5.4 are not considered yet); mild importance is given to patient safety generally, although some courses do train students on this issue (B 2.5.5 is accomplished). The quality development standards above are considered at ICBAS, though students' participation in patient care is minimal (Q 2.5.1, Q 2.5.2 and Q 2.5.4 are accomplished, Q 2.5.3 is not considered yet). It is important to acknowledge that the newly approved medical curriculum, through the creation of two new courses on "Introduction to Medicine" in the first year, does try to counteract part of the problems explained above.

2.6 Programme structure, composition and duration

Comment:

The new proposed curriculum ensures accomplishment of all these standards (B 2.6.1 and Q 2.6.1 to Q 2.6.4) with a special note to the implementation of optional courses throughout the degree. In order to ensure both horizontal and vertical integration of the clinical sciences, besides having a coordinator for each academic year, ICBAS should have a coordinator for each area of teaching, as

to ensure there are no overlaps between different courses, and that the medical student completes his/her studies with a complete exposure to all academic areas.

2.7 Programme management

Comment:

With the elaboration of a new curriculum, a curriculum committee was established, that is representative of all involved stakeholders (B 2.7.1, B 2.7.2, Q 2.7.1 and Q 2.7.2 are accomplished). The potential of this committee is fully explained on the SWOT analysis above.

2.8 Linkage with medical practice and the health sector

Comment:

The reality of post-graduate practice is changing in Portugal, with legislation on residency being modified, and a new residency exam being created. It is believed that ICBAS seeks to keep itself updated on this issue, and will adapt its curriculum to the new reality of medical practice. (B 2.8.1, Q 2.8.1 and Q 2.8.2 are accomplished).

3. Assessment of Students

1. Assessment Methods

Comment:

Students' assessment is one of the weakest assets of ICBAS, as documented on the self-evaluation document presented. The online platform of ICBAS has a page for each course, that most, but not all, teachers use, though never to its full potential. Assessments are not always ideal, but tend to cover essentials. Its methods are, in most of the subjects, a basic multiple choice examination, with no exploration of other assessment methods. There are many conflicts of interest between the type of subject and its evaluation format, and though never external audits have happened (even when requested), most teachers tend to ensure the possibility of an appeal of results. Assessment methods have never been evaluated, with no implementation of new methods or encouragement of ex-

ternal examiners. B 3.1.1, B 3.1.2 and B 3.1.6 are accomplished, but B 3.1.3 to B 3.1.5 and Q 3.1.1 to Q 3.1.3 are not considered yet. It is recommended that evaluation processes should be submitted to external auditing, so that they can be evaluated on an independent manner, and improved as possible.

2. Relation Between Assessment and Learning

Comment:

Though students do obviously learn and therefore meet the intended education outcomes, assessment is not always compatible with these outcomes, and has no balance of formative and summative aspects. Nature and number of examinations is not balanced, and no feedback system is implemented. B 3.2.2 and B 3.2.3 are accomplished, but B 3.2.1, B 3.2.4, Q 3.2.1 and Q 3.2.2 are not considered yet.

4. Students

1. Admission Policy and Selection

Comment:

Admission policies are set by law, and not by the school. No selection process takes place, as law defines a “first come first serve” approach, with the students with the highest high school grades being the first admitted. National law, defines that all universities should make 20% of admissions reserved for disabled students. During the last decade, no spots have been opened for transfer students, as per online announcement of this. International students are allowed in ICBAS, but not on the Masters in Medicine, and not via transfer but via international application processes. B 4.1.2 is accomplished, but B 4.1.1, B 4.1.3, and Q 4.1.1 to Q 4.1.3 are not considered yet. It is important to realise that part of these criteria cannot be accomplished not because ICBAS is not aware that they should, but because the central government regulates the entire process of applications to undergraduate training, and ICBAS must follow these norms.

2. Student Intake

Comment:

The size of student intake is set by the government, and absolutely exceeds the true capacity of ICBAS. B 4.2.1 and Q 4.2.1 are not considered yet.

3. Student Counselling and Support

Comment:

ICBAS has a Student Support Office created to support students on all their problems. The University has social services that provide social financial and personal support. The Ministry of Education provides social scholarships for the students with lowest financial background. Under all these offices, confidentiality is ensured. B 4.3.1 to B 4.3.4 are accomplished. Students' progress is considered, but is not a binding criteria for support. Career guidance and planning a real need of ICBAS students, that has not been met. As suggested above GEM should do this. Q 4.3.1 is considered but not fully implemented, and Q 4.3.2 is not considered yet.

4. Student Representation

Comment:

ICBAS Governing bodies, namely the pedagogic council, the executive board and the monitoring committee, include students, or representatives of the student association. These are the bodies responsible for criteria B 4.4.1 to B 4.4.5, therefore these are considered accomplished. ICBAS is proud of all its academic groups and student organisations, and therefore Q 4.4.1 is accomplished too.

5. Academic Staff / Faculty

1. Recruitment and Selection Policy

Comment:

As presented in the SWOT analysis, due to the financial crisis that Portugal recently went through, hiring of personnel is now blocked by the government. Therefore, none of these standards are fully accomplished, but are considered. There is, in Portugal, an university teaching career code that sets the academic qualifications necessary to evolve in the academic career, and national law also defines these for medical schools.

2. Staff Activity and Staff Development

Comment:

B 5.2.1 to B 5.2.5 are considered, as the university does provide some training to staff, but not implemented to its fullest potential. The teacher-student ratio is considered to ensure academic quality: some courses have as many as 25 students to one teacher, but others, mostly in the hospital, have only 2 or three. The average student-teacher ration is around 6:1. Q 5.2.1 is therefore accomplished. Q 5.2.2 is accomplished through the university teaching career code explained above.

6. Educational Resources

1. Physical Facilities

Comment:

ICBAS has new facilities, built only a few years ago. However, the quality of the construction is minimal, and the building currently shows bad construction and conservation: rain falls on many places, walls and ceiling broke, and many of the exterior places are currently closed for safety reasons. Despite the improvement from the old building, facilities are not adequate, both in quality and quantity, for and adequate delivery of the curriculum. (B 6.1.1 and B 6.1.2 are therefore considered, but not accomplished, Q 6.1.1 is accomplished).

2. Clinical Training Resources

Comment:

Despite the close contact with a district hospital (with many patients from a very broad spectrum of clinical backgrounds) and partnerships with other healthcare facilities, it is obvious that there are not enough patients nor teachers to ensure a high quality medical education. This issue doesn't seem to be evaluated nor improved. (B 6.1.1 to B 6.1.3 are considered, though not accomplished, whereas Q 6.2.1 is not considered yet). As explained before, one of the main reasons for this problem is the size of yearly student intake. This number is set by the national government, and despite ICBAS' governing bodies annually alerting the ministry for this issue, this number is always above ICBAS true teaching capacity.

3. Information Technology

Comment:

Though not to its full potential, information technology is widespread in ICBAS. Access to IT material is sometimes limited, as there is no functional room specifically allocated for students (neither at the faculty nor at the hospital). Through its online platforms, ICBAS does provide information technology support to its students, but no specific policy exists on this subject (B 6.3.1 is not considered; B 6.3.2 and Q 6.2.1 to Q 6.3.5 are accomplished). It is recommended that ICBAS' online platforms, namely SIGARRA and Moodle, are used to its full potential, benefiting students learning and the general quality of teaching.

4. Medical Research and Scholarship

Comment:

Research is one of the biggest strengths of ICBAS. Investigation is done on dozens of different laboratories and departments, and directly influences the curriculum and the training delivered to students. This relationship is stronger and most visible in the pre-clinical cycle (B 6.4.1 to B 6.4.3, Q 6.4.1 and Q 6.4.2 are accomplished). As explained before, students would benefit enormously should they actively engage with investigation, instead of just being aware that academic staff works on it.

5. Educational Expertise

Comment:

Though ICBAS has access to educational expertise, it has no specific policy regarding this. Staff training and medical education do not seem to be a priority in ICBAS. (B 6.5.1 is accomplished; B 6.5.2, B 6.5.3 and Q 6.5.1 to Q 6.5.3 are not considered yet). The recently established Medical Education Office should have the mandate to consider and implement all the above criteria.

6. Educational Exchanges

Comment:

Educational exchanges for students are a priority in ICBAS. Out-going and incoming students are a reality for any class as of the 4th year of studies, mainly through ERASMUS Programme, but also through other exchange partnerships. Exchange for staff are set up, though current financial constraints that limit hiring of new personnel limit outgoing staff. (B 6.6.1, B 6.6.2, Q 6.6.1 and Q 6.6.2 are accomplished, though more for students)

7. Programme Evaluation

1. Mechanisms for Programme Monitoring and Evaluation

Comment:

At the end of each semester, students are asked to fill in evaluation forms about each subject they took. The results are processed statistically and delivered to the school's board. Besides this, periodic (but not regular) evaluations are made, as the self-evaluation and the SWOT analysis presented above. Finally, every three years, the school is evaluated by a national accreditation board. How much all these processes actually influence the academic quality of the school is arguable. A very small portion of students comments/critics are taken into consideration on a timely manner, and the new curriculum proposed is the outcome of a 3 year process that is not yet over. Therefore, the standards above categorise as

considered but not accomplished yet as the referred mechanisms are not yet implemented to full potential.

2. Teacher and Student Feedback

Comment:

As in section 7.1, the mechanisms do exist but are not implemented to its full potential, and therefore criteria are categorised as considered but not accomplished yet.

3. Performance of Students and Graduates

Comment:

The only public information regarding evaluation of students, is that produced by the National Medical Students Association. ICBAS does not seek to evaluate students, and does not use such information towards improving its academic quality. On individual courses, responsible teachers should seek to evaluate there outcomes. B 7.3.1 to B 7.3.3 and Q 7.3.1 to Q 7.3.5 are not considered yet.

4. Involvement of Stakeholders

Comment:

Besides external audits such as the one by the national accreditation board, very little evaluation of ICBAS' activities are done, and the ones done, do not involve other stakeholders (B 7.4.1 and Q 7.4.1 to Q 7.4.3 are not considered yet)

8. Governance and Administration

1. Governance

Comment:

The governance of ICBAS is defined and published under its constituency. Transparency is ensured through auditing and regular publishing of reports. B 8.1.1 and Q 8.1.1 to Q 8.1.3 are accomplished.

2. Academic Leadership

Comment:

Responsibility and task description of all bodies of ICBAS' academic leadership are defined by its Constituency, and all bodies are elected and have to produce reports of the work developed during each mandate. B 8.2.1 and Q 8.2.1 are accomplished.

3. Educational Budget and Resource Allocation

Comment:

Basic criteria are accomplished, as the budget is used in order to ensure the highest quality of medical education possible. As for the autonomy that ICBAS has to direct resources, it quite limited. The aspected referred on Q 8.3.1 are set by the university's rectorate, whilst the ones on Q 8.3.2 are set by ICBAS itself, therefore these two criteria are collectively qualified as considered.

4. Administration and Management

Comment:

Administrative personnel is short for the number of students in ICBAS. Therefore, despite staff doing it best to fulfil their job, they are slow in doing so. Administrative staff is regularly evaluated through internal monitoring mechanisms. (B 8.4.1, B 8.4.2 and Q 8.4.1 are accomplished).

5. Interaction with Health Sector

Comment:

ICBAS is inserted on the big network of healthcare in Portugal, and has established collaboration in all relevant areas. (B 8.5.1 and Q 8.5.1 are accomplished). The hospital next to ICBAS was recently renamed to university hospital, which strengthens this partnership, as this change envisions explain all patients that students a part of the hospital's life.

9. Continuous Renewal

Comment:

ICBAS generally seeks continuous renewal, improvement and rectification of deficiencies, the two biggest examples being the new facilities, and the implementation of a new medical curriculum. More evaluation mechanisms can be developed as to have more knowledge about what is ICBAS reality, and medical education should be tackled in a more direct manner (B 9.0.1 to B 9.0.3 are accomplished, Q 9.0.1 to Q 9.011 are accomplished, though not to its full potential). Once again, it is recommended that the Medical Education Office works towards a continuous improvement on all the above criteria.

1 - Mission and Outcomes		1 - Mission and Outcomes		2 - Educational Programme	
Criteria	Status	Criteria	Status	Criteria	Status
B 1.1.1	Accomplished	Q 1.4.1	Not considered yet	Q 2.5.2	Accomplished
B 1.1.2	Accomplished	2 - Educational Programme		Q 2.5.3	Not considered yet
B 1.1.3	Accomplished	Criteria	Status	Q 2.5.4	Accomplished
B 1.1.4	Accomplished	B 2.1.1	Accomplished	3 - Assessment of Students	
B 1.1.5	Accomplished	B 2.1.2	Accomplished	Criteria	Status
B 1.1.6	Accomplished	B 2.1.3	Accomplished	B 3.1.1	Accomplished
B 1.1.7	Accomplished	Q 2.1.1	Accomplished	B 3.1.2	Accomplished
B 1.1.8	Accomplished	B 2.2.1	Accomplished	B 3.1.3	Not considered yet
Q 1.1.1	Accomplished	B 2.2.2	Accomplished	B 3.1.4	Not considered yet
Q 1.1.2	Accomplished	B 2.2.3	Accomplished	B 3.1.5	Not considered yet
B 1.2.1	Accomplished	Q 2.2.1	Not considered yet	B 3.1.6	Accomplished
B 1.2.2	Not considered yet	B 2.3.1	Accomplished	Q 3.1.1	Not considered yet
Q 1.2.1	Accomplished	B 2.3.2	Accomplished	Q 3.1.2	Not considered yet
Q 1.2.2	Accomplished	Q 2.3.1	Accomplished	Q 3.1.3	Not considered yet
B 1.3.1	Accomplished	Q 2.3.2	Accomplished	Q 3.1.3	Not considered yet
B 1.3.2	Accomplished	B 2.4.1	Accomplished	B 3.2.1	Not considered yet
B 1.3.3	Accomplished	B 2.4.2	Accomplished	B 3.2.2	Accomplished
B 1.3.4	Accomplished	B 2.4.3	Accomplished	B 3.2.3	Accomplished
B 1.3.5	Accomplished	B 2.4.4	Accomplished	B 3.2.4	Not considered yet
B 1.3.6	Accomplished	Q 2.4.1	Accomplished	Q 3.2.1	Not considered yet
B 1.3.7	Not considered yet	Q 2.4.2	Accomplished	Q 3.2.2	Not considered yet
B 1.3.8	Accomplished	Q 2.4.3	Accomplished	B 2.6.1	Accomplished
Q 1.3.1	Not considered yet	B 2.5.1	Accomplished	Q 2.6.1	Accomplished
Q 1.3.2	Not considered yet	B 2.5.2	Not considered yet	Q 2.6.2	Accomplished
Q 1.3.3	Not considered yet	B 2.5.3	Accomplished	Q 2.6.3	Accomplished
B 1.4.1	Not considered yet	B 2.5.4	Not considered yet		
		B 2.5.5	Accomplished		
		Q 2.5.1	Accomplished		

Q 2.6.4	Accomplished
B 2.7.1	Accomplished
B 2.7.2	Accomplished
Q 2.7.1	Accomplished
Q 2.7.2	Accomplished
B 2.8.1	Accomplished
Q 2.8.1	Accomplished
Q 2.8.2	Accomplished

4 - Students

Criteria	Status
B 4.1.1	Not considered yet
B 4.1.2	Not considered yet
B 4.1.3	Not considered yet
Q 4.1.1	Not considered yet
Q 4.1.2	Accomplished
Q 4.1.3	Not considered yet
B 4.2.1	Not considered yet
Q 4.2.1	Not considered yet
B 4.3.1	Accomplished
B 4.3.2	Accomplished
B 4.3.3	Accomplished
B 4.3.4	Accomplished
Q 4.3.1	Considered
Q 4.3.2	Not considered yet
B 4.4.1	Accomplished
B 4.4.2	Accomplished

4 - Students

B 4.4.3	Accomplished
B 4.4.4	Accomplished
B 4.4.5	Accomplished
Q 4.4.1	Accomplished

5 - Academic Staff / Faculty

Criteria	Status
B 5.1.1	Considered
B 5.1.2	Considered
B 5.1.3	Considered
Q 5.1.1	Considered
Q 5.1.2	Considered
B 5.2.1	Considered
B 5.2.2	Considered
B 5.2.3	Considered
B 5.2.4	Considered
B 5.2.5	Considered
Q 5.2.1	Accomplished
Q 5.2.2	Accomplished

6 - Educational Resources

Criteria	Status
B 6.1.1	Considered
B 6.1.2	Considered
Q 6.1.1	Accomplished
B 6.2.1	Considered
B 6.2.2	Considered
B 6.2.3	Considered
Q 6.2.1	Not considered yet

6 - Educational Resources

B 6.3.1	Not considered yet
B 6.3.2	Accomplished
Q 6.3.1	Accomplished
Q 6.3.2	Accomplished
Q 6.3.3	Accomplished
Q 6.3.4	Accomplished
Q 6.3.5	Accomplished
B 6.4.1	Accomplished
B 6.4.2	Accomplished
B 6.4.3	Accomplished
Q 6.4.1	Accomplished
Q 6.4.2	Accomplished
B 6.5.1	Accomplished
B 6.5.2	Not considered yet
B 6.5.3	Not considered yet
Q 6.5.1	Not considered yet
Q 6.5.2	Not considered yet
Q 6.5.3	Not considered yet
B 6.6.1	Accomplished
B 6.6.2	Accomplished
Q 6.6.1	Accomplished
Q 6.6.2	Accomplished

7 - Programme Evaluation

Criteria	Status
B 7.1.1	Considered
B 7.1.2	Considered
B 7.1.3	Considered

7 - Programme Evaluation

B 7.1.4	Considered
B 7.1.5	Considered
Q 7.1.1	Considered
Q 7.1.2	Considered
Q 7.1.3	Considered
Q 7.1.4	Considered
B 7.2.1	Considered
Q 7.2.1	Considered
B 7.3.1	Not considered yet
B 7.3.2	Not considered yet
B 7.3.3	Not considered yet
Q 7.3.1	Not considered yet
Q 7.3.2	Not considered yet
Q 7.3.3	Not considered yet
Q 7.3.4	Not considered yet
Q 7.3.5	Not considered yet
B 7.4.1	Not considered yet
Q 7.4.1	Not considered yet
Q 7.4.2	Not considered yet
Q 7.4.3	Not considered yet

8 - Governance and Administration

Criteria	Status
B 8.1.1	Accomplished
Q 8.1.1	Accomplished
Q 8.1.2	Accomplished
Q 8.1.3	Accomplished
B 8.2.1	Accomplished
Q 8.2.1	Accomplished
B 8.3.1	Accomplished
B 8.3.2	Accomplished
Q 8.3.1	Considered
Q 8.3.2	Considered
B 8.4.1	Accomplished
B 8.4.2	Accomplished
Q 8.4.1	Accomplished
B 8.5.1	Accomplished
Q 8.5.1	Accomplished

9 - Continuous Renewal

Criteria	Status
B 9.0.1	Accomplished
B 9.0.2	Accomplished
B 9.0.3	Accomplished
Q 9.0.1	Accomplished
Q 9.0.2	Accomplished
Q 9.0.3	Accomplished
Q 9.0.4	Accomplished
Q 9.0.5	Accomplished
Q 9.0.6	Accomplished

9 - Continuous Renewal

Q 9.0.7	Accomplished
Q 9.0.8	Accomplished
Q 9.0.9	Accomplished
Q 9.0.10	Accomplished
Q 9.0.11	Accomplished
Q 9.0.12	Accomplished

Conclusion

ICBAS and the global standards in medical education

The main goal of this thesis was to analyse the quality of medical education at ICBAS, having the WFME Global Standards in Medical Education as main criteria. Therefore, after categorising all its 196 criteria, basic and quality, into accomplished, considered, and not considered yet, the results of all 9 areas were collectively assembled as to have a general picture of the reality of the Masters in Medicine at ICBAS. Each area was then analysed into further detail, as to conclude on what are ICBAS' true strengths and weaknesses. Together with the SWOT analysis initially presented, the author intends to produce a thorough investigation to the quality of medical education in ICBAS, being able to achieve unambiguous conclusions and suggest specific recommendations.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	66	53	118	60,71%
Considered	19	10	29	14,80%
Not Considered Yet	21	27	48	24,49%
Total	106	90	196	
% Accomplished	62,26%	58,59%	60,71%	

The WFME defines “Basic Criteria” as standards which in principle must be met by every medical school and fulfilment demonstrated during evaluation of the school; and “Quality Criteria” as standards which are in accordance with international consensus about best practice for medical schools and basic medical education. Even the most advanced schools might not comply with all standards.

ICBAS has accomplished 62,26% of the 106 Basic Criteria, and 58,59% of the 90 Quality Criteria, with a global accomplishment level of 60,71%. It is notorious that an effort has to be made to accomplish more basic criteria, expressed as “must”, especially given the 21 of them are not considered yet. However, the fact that more than half of the quality criteria are accomplished is a strong indicator of a high level of medical education.

By analysis each area of the global standards, a more specific overview of ICBAS' reality can be made.

Regarding its “Mission and Outcomes”, 84,21% of the basic criteria are accomplished. Lack of autonomy in resource allocation, lack of stakeholder involvement, and lack of a code of conduct are the three points that prevent a better result. The first is difficult to solve, as it is a direct consequence of national law, but the author urges the school to create a code of conduct, and better involve all relevant stakeholders in future mission updates.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	16	4	20	74,07%
Considered	0	0	0	0,00%
Not Considered Yet	3	4	7	25,93%
Total	19	8	27	
% Accomplished	84,21%	50,00%	74,07%	

Area 1 - Mission and Outcomes

As for the “Educational Programme” of ICBAS, it represents the school's strongest area, with an accomplishment rate above 90%. The only two criteria which are not considered yet regard the amount of time students spend in direct contact with patients. As explained above, despite this criteria not being defined anywhere, it is consensual that it does not represent a sufficient amount of time. The two main reasons for this are the excessive number of students, and the current impossibility to hire more staff. These issues are controlled by the government, and not by the school, but the author strongly recommends that the school's governing body improves its communication with national authorities, as to show them the importance of tackling this weakness.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	19	17	36	90,00%
Considered	0	0	0	0,00%
Not Considered Yet	2	2	4	10,00%
Total	21	19	40	
% Accomplished	90,48%	89,47%	90,00%	

Area 2 - Educational Programme

“Assessment of Students” is one of ICBAS’ biggest weaknesses, with only half of the basic criteria being accomplished. It is believed that assessment methods are not compatible with intended outcomes, have many times limited utility, and lead to conflicts of interest. Furthermore, they have never been opened to external scrutiny. The author believes that very specific action points can be defined: calling for an external audit would allow the school to have a clear-cut image of what are the problems with the assessment of students; and narrowing the gap between the school’s board and its teachers would help to ensure all academic staff evaluates their assessment methods.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	5	0	5	33,33%
Considered	0	0	0	0,00%
Not Considered Yet	5	5	10	66,67%
Total	10	5	15	
% Accomplished	50,00%	0,00%	33,33%	

Area 3 - Assessment of Students

Regarding “Students”, on third of the criteria are not considered yet, but it is important to realise that this is because these criteria refer to issues that are handled buy the government and not the school. Application to undergraduate learning happens at a national level, and individual schools take no word on it. However, yet again, the number of students that start studying medicine in ICBAS every year is way beyond it’s true capacity, and the author believes more pressure could be done at the Ministry of Education, as to decrease the *numero clausus*.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	9	2	11	55,00%
Considered	0	1	1	5,00%
Not Considered Yet	4	4	8	40,00%
Total	13	7	20	
% Accomplished	69,23%	28,57%	55,00%	

Area 4 - Students

There are two areas in which ICBAS has a disappointing accomplishment rate of 0%, and “Academic Staff / Faculty” is one of them. The author is please to realise that all criteria have been considered, but it absolutely unsatisfying that no action has been undertaken. Portuguese financial crisis prevents ICBAS from hiring new personnel, and nothing can be done regarding this. However, the author does recommend that staff should be encouraged (namely by financial incentives, or days-off) to attend more trainings provided by the university; and the distribution of teaching staff should be analysed and adjusted, in an effort obtain the best teacher-student rations possible.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	0	2	2	16,67%
Considered	8	2	10	83,33%
Not Considered Yet	0	0	0	0,00%
Total	8	4	12	
% Accomplished	0,00%	50,00%	16,67%	

Area 5 - Academic Staff / Faculty

Concerning “Education Resources”, the school, again, doesn’t reach the 50% accomplishment cutoff for basic criteria, though more than 70% of the quality criteria are met. One third of the points are considered, namely regarding physical facilities and clinical training resources, but despite having a new building and a nearby academic hospital, neither of these two assets are being explored to its full potential, as the building has many construction problems, and the hospital doesn’t have enough patients for the amount of students.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	7	10	17	58,62%
Considered	5	0	5	17,24%
Not Considered Yet	3	4	7	24,14%
Total	15	14	29	
% Accomplished	46,67%	71,43%	58,62%	

Area 6 - Educational Resources

The second area in which ICBAS has obtained no accomplishment at all is “Programme Evaluation” as no criteria, either basic or quality as been reached, though half of them are considered. Mechanisms for programme monitoring and feedback have been considered, but are not explored to its fullest potential. However, student’s evaluation and stakeholder involvement in this have not even been considered. The only available data is gathered by the National Board of Medical Students, and not by the school. It is strongly recommended that ICBAS seeks to evaluate itself, and its students, as a means to improve the quality of the work developed.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	0	0	0	0,00%
Considered	6	5	11	47,83%
Not Considered Yet	4	8	12	52,17%
Total	10	13	23	
% Accomplished	0,00%	0,00%	0,00%	

Area 7 - Programme Evaluation

Surprisingly, the area where ICBAS reaches its best result is “Governance and Administration”, with 100% of basic criteria being accomplished, and only 2 quality criteria not being attained yet. These two criteria are related to the autonomy in use of resources, which is limited by national law, meaning ICBAS cannot be blamed for an even better result.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	7	6	13	86,67%
Considered	0	2	2	13,33%
Not Considered Yet	0	0	0	0,00%
Total	7	8	15	
% Accomplished	100,00%	75,00%	86,67%	

Area 8 - Governance and Administration

The last area, “Continuous Renewal” also had full scores, though it is important to realise what this means: Seeking continuous renewal does not necessarily mean that improvements are continuously met. Therefore, the author advice is to ensure that, when making evaluations, results are analysed as to find out what can be changed and adapted, towards an even better result. To “initiate procedures for regularly reviewing and updating the process, structure, content, outcomes/competencies, assessment and learning environment of the programme”, criteria B 9.0.1 should be the mandate of the recently created Medical Education Office, and only a close monitoring of all these criteria can ensure ICBAS continuously renews itself.

	Basic Criteria	Quality Criteria	Total	%
Accomplished	3	12	15	100,00%
Considered	0	0	0	0,00%
Not Considered Yet	0	0	0	0,00%
Total	3	12	15	
% Accomplished	100,00%	100,00%	100,00%	

Area 9 - Continuous Renewal

The SWOT Analysis made in 2015 pointed out, as mains strengths, the multidisciplinary approach, the collaborations with healthcare facilities, the amount of research, the Medical Simulation Centre and the Student Support Office Support Office; and, as main weaknesses, the curriculum, the student-teacher ratios, the management of quality of medical education and the teachers participation in trainings.

These points are considered to be in line with the in depth analyses now made through the WFME Global Standards in Medical Education. However, because these standards include 196 different criteria, it is believed that a more thorough evaluation was now done. Through it, the author made specific conclusions that lead to specific recommendations, that are believed to increase the overall quality of the school.

Finally, the author would like to congratulate the recent establishment of a Medical Education Office. When this work started, such an office did not exist yet. It is considered that the mandate of this Office is huge because, though many strengths were found, a lot can still be done in fostering the quality of medical education.

This thesis seeks to be a useful tool for the future of ICBAS. For its students, for its teachers, for its governing bodies, but above all, to the Medical Education Office, to whom the author humbly offers his work. Because of this, it was decided that the format of the work and its word limit should be taken into consideration, as it would seriously jeopardise the ultimate goal of helping

this school to be a better school. A lot has been done, but even more can in future be done, and the author hopes the reader is now inspired to, more than elaborate theories, apply these conclusions and recommendations towards taking ICBAS to the highest attainable goals.

“There is no substitute for hard work”

Thomas A. Edison

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Secção 1

Artigo 2.o

2 -

ACEF/1516/15912 — Guião para a auto-avaliação

Autoavaliação MIM

1.1 Objetivos gerais definidos para o ciclo de estudos.

3 -

ACEF/1516/15912 — Guião para a auto-avaliação

Autoavaliação MIM

2.2. Garantia da Qualidade

2.2.1. Estruturas e mecanismos de garantia da qualidade para o ciclo de estudos.

4 -

ACEF/1516/15912 — Guião para a auto-avaliação

Autoavaliação MIM

Tabela 5.1.1.1; 5.1.1.2 e 5.1.2

5 -

ACEF/1516/15912 — Guião para a auto-avaliação

Autoavaliação MIM

5.2.4. Utilização dos resultados de inquéritos de satisfação dos estudantes na melhoria do processo ensino/aprendizagem.

6 -

ACEF/1516/15912 — Guião para a auto-avaliação

Autoavaliação MIM

6.1. Objetivos de ensino, estrutura curricular e plano de estudos

6.1.1. Objetivos de aprendizagem (conhecimentos, aptidões e competências) a desenvolver pelos estudantes, operacionalização dos objetivos e medição do seu grau de cumprimento.

7 -

ACEF/1516/15912 — Guião para a auto-avaliação
Autoavaliação MIM

8. Análise SWOT do ciclo de estudos

8.1 Análise SWOT global do ciclo de estudos

8.1.1. Pontos fortes

8 -

ACEF/1516/15912 — Guião para a auto-avaliação
Autoavaliação MIM

8. Análise SWOT do ciclo de estudos

8.1 Análise SWOT global do ciclo de estudos

8.1.2. Pontos fracos

9 -

ACEF/1516/15912 — Guião para a auto-avaliação
Autoavaliação MIM

8. Análise SWOT do ciclo de estudos

8.1 Análise SWOT global do ciclo de estudos

8.1.3. oportunidades

10 -

ACEF/1516/15912 — Guião para a auto-avaliação
Autoavaliação MIM

8. Análise SWOT do ciclo de estudos

8.1 Análise SWOT global do ciclo de estudos

8.1.4. constrangimentos

11 -

ACEF/1516/15912 — Guião para a auto-avaliação
Autoavaliação MIM

9. Proposta de ações de melhoria

9.1. Ações de melhoria do ciclo de estudos

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